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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,442	03/02/2005	Ralph Nonninger	3315	3344

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EXAMINER	
METZMAIER, DANIEL S	

ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
10/30/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/526,442	NONNINGER ET AL.	
	Examiner	Art Unit	
	Daniel S. Metzmaier	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,3 and 8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,3 and 8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 2-3 and 8 are pending.

Claim interpretation

1. It is noted that claim 3 provides dilute acid for the dispersion medium and claims 2 and 3 provide inorganic or organic acid as the surface modifier. Since dilute acid encompasses the modifiers of claim 2, a reference disclosing the use of a dispersion medium of dilute acid as set forth in claim 3 would likewise encompass claim 2. An acid modifier as set forth in claim 2 would likewise read on the scope of claim 3.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 2-3 and 8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Burgard et al (denoted Burgard et al (I)), Synthesis and Colloidal Processing of Nanocrystalline (Y_2O_3-stabilized) ZrO_2 Powders by a Surface Free Energy Controlled Process, Materials Research Society Symposium Processing, Materials Research Society, Pittsburgh, PA US Bd. 432, 8, April 1996 pp. 113-120. See pages 114-115 for formation and redispersing of nanoparticles (5 to 10 nanometers) ZrO_2 doped with Y_2O_3 that have been surface modified with β-diketone or organic acid and redispersed in water.

To the extent Burgard et al (I) differs from the claims in the particle size distribution, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to have some variation in particle size as a particle size impurity. See MPEP 2144.04(VII); "Purer forms of known products may be patentable, but the mere purity of a product, by itself, does not render the product unobvious. *Ex parte Gray*, *supra*."

6. Claims 2-3 and 8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Burgard et al (denoted Burgard et al (II)), Manufacture and Processing of Nanoscale (stabilized) ZrO_2 by a Colloid-

Chemical Process, Institut fur neue Materialien, Symposium 6, Werkstoff- und Verfahrenstechnick '96, Stuttgart, pp. 569-577; as evidenced by Chemical Abstract AN 1998:64092. Burgard et al **(II)** is believed to have the same of substantially same disclosure as Burgard et al **(I)** and is believed cumulative thereto.

To the extent Burgard et al **(II)** differs from the claims in the particle size distribution, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to have some variation in particle size as a particle size impurity. See MPEP 2144.04(VII); "Purer forms of known products may be patentable, but the mere purity of a product, by itself, does not render the product unobvious. *Ex parte Gray*, *supra*."

7. Claims 2-3 and 8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nonninger et al, "*Development of New Materials by Chemical Nanotechnologies*", Zusammenfassung & Werkstoffwoche, 98, Band VIII:Symposium 10, Polymere:symposium 14, Simulation Polymere, Munich, Sept, 1998, Meeting date 1998, pp. 187-192, Editors: Michaeli, Walter. Wiley VCH Verlag GmbH Weinheim, Germany; as evidenced by Chemical Abstract AN 2000:193596. See the abstract and Table 1 on page 188 and silane surface treatment on page 189.

To the extent Nonninger et al differs from the claims in the particle size distribution, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to have some variation in particle size as a particle size impurity. See MPEP 2144.04(VII); "Purer forms of known products may be patentable, but the

mere purity of a product, by itself, does not render the product unobvious. *Ex parte Gray*, *supra*."

8. Claims 2-3 and 8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bayer AG, DE 198 59 867 A, as evidenced by Derwent Abstract AN 2000-466923. See Derwent Abstract and reference examples.

To the extent Bayer AG differs from the claims in the particle size distribution, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to have some variation in particle size as a particle size impurity. See MPEP 2144.04(VII); "Purer forms of known products may be patentable, but the mere purity of a product, by itself, does not render the product unobvious. *Ex parte Gray*, *supra*."

Response to Arguments

9. Applicant's arguments filed 22 July 2008 have been fully considered but they are not persuasive.

10. Applicants (pages 6 and 7) assert none of the cited references are directed to the particle size distribution as claimed and therefore are distinguished from the prior art. This has not been deemed persuasive since the particular particle size distribution has not been shown to patentably distinguish the instant claims from the prior art. the references disclose narrow particle size ranges and would be expected to have a correspondingly narrow particle size distribution.

Furthermore, the agglomerated particles would be considered an impurity, which may be obviously separated from the claimed compositions for the resulting obvious purified narrow particle size distribution suspension.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Goerbbert C et al, "*Wet Chemical Deposition of ATO and ITO Coatings Using Crystalline Nanoparticles Redispersible in Solutions*", Thin Solid Films, Elsevier-Sequoia S.A. Lausanne,CH, Bd. 351, Nr. 1-2, 30 Aug. 1999, pp 79-84, is directed to tin oxide and/or indium oxide particles and lacks the oxides set forth in instant claim 1. Goerbbert C et al is cited as an X reference for claims 1-8, within the search report.

Bayer AG, DE 198 59 852 A, as evidenced by Derwent Abstract AN 2000-491703, is directed to TiO_2, which is not set forth in the instant claim 1. Bayer AG is cited as an X reference for claims 1-5, within the search report.

Goerbbert C et al, "*Preparation of Conducting Ultrafiltration Membrane from Redispersible, nanoscaled, Crystalline SnO_2:Sb particles*", cited as an X reference for claims 1-5, within the search report lacks the oxides set forth in the instant claim 1.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel S. Metzmaier/
Primary Examiner, Art Unit 1796

DSM